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**"Sustaining America's Strategic Deterrent Forces  
in the 21<sup>st</sup> Century"**

**Keynote Address of  
The Under Secretary of Defense for Acquisition and Technology  
Honorable Paul G. Kaminski**

**Strategic Systems Industrial Symposium  
U.S. Strategic Command, Offutt AFB, Nebraska**

**September 26, 1996**

Good morning. It's a pleasure to be with you today, here at Offutt AFB, home of the US Strategic Command. It was not too long ago – before June 1, 1992 to be precise – that I would have said "home of the Strategic Air Command."

Last evening at the reception and dinner, the memorabilia on the walls of the Offutt Officers' Club reminded me of the long and distinguished tradition of this place. It also reminded me of a conversation between Pavel Grachev, the former Russian Minister of Defense, and Lee Butler, the last commander of the Strategic Air Command and the first Commander-in-Chief of US Strategic Command.

During the conversation, Pavel Grachev remarked "Nuclear weapons are what makes Russia a great nation." Lee Butler thought about the remark briefly and responded "General Grachev, nuclear weapons make you a powerful nation. The fact that you are now a democracy is what makes you a great nation."

In the words of Lee Butler, Russia took one more step towards becoming a great nation this summer with the inauguration of their first ever democratically elected President. But the democracy in Russia is still fragile. Contrary to the hopes of many and the predictions of some, the end of the Cold War did not bring an end to the dangers attendant to the proliferation of weapons of mass destruction.

Yes, the Soviet Union is gone. Yes, the most daunting threats that we faced during the Cold War have gone with it. But as long as weapons of mass destruction exist in the world, and as long as there are leaders who believe these weapons make their nations great, the risk of conflict will remain.

The new post-Cold War dangers make the task of protecting America's national security different and in some ways more complex than it was during the Cold War. Today US strategy for managing post-Cold War dangers to our security rests on three basic lines of defense. The first line of defense is to prevent threats from emerging; the

second is to deter threats that do emerge; and the third, if prevention and deterrence fail, is to defeat the threat to our security by using military force.

These basic strategic concepts are not new—they have been around for many years. What is different today is the emphasis we place upon them and the way we implement them. General Habiger and I invited you to this symposium to explore how we can better sustain and support our nation's strategic nuclear deterrent forces—a vital component of our post-Cold War defense strategy.

## DEFENSE BUDGET OUTLOOK

Let me set the stage for this discussion by sharing with you my views on where the defense budget is headed.

As I see it, the pressure on defense spending will continue. The real value of defense spending has declined in each of the last eleven years since 1986—through the last three years of the Reagan Administration, through Desert Storm and the Bush Administration and now through the first term of the Clinton Administration.

We plan to stabilize defense spending at the proposed 1997 level of around \$244 billion—\$254 billion if you include defense-related work in the Department of Energy budget—and then sustain small levels of real growth at about one percent per year. Some would say that this is too optimistic for at least three reasons.

First, we are facing a reduced threat. Think of it—the United States outspends the six next biggest military powers. Combined. And five of those six are our allies.

Second, non-discretionary spending—entitlements and the interest on the national debt—are taking up a growing share of the federal budget. Put more starkly, these mandatory expenditures accounted for only 29.6 percent of the federal budget in 1963. In 2003, they will account for 72 percent of the budget. The net interest on national debt is now just over \$240 billion, almost equal to defense spending. This is our motivation to balance the budget.

And third, polling data indicates that the American people, by a two-to-one margin, want further cuts in defense spending. When asked what items in the budget should, or should not, be cut, 72 percent of Americans responded that Social security should not be cut and 64 percent responded that Medicare should not be cut. At the same time, 64 percent said the defense budget should be cut further.

Frankly, as I said last year, I am not encouraged that recent Congressional adds to the defense budget are much cause for long term optimism. Nothing has changed my opinion over the past year. The budget authority set by the Congressional Budget

Resolution contains near term Congressional adds, but provides less funding than the President's Budget—to the tune of nearly \$10 billion less per year—after the year 2000.

These are the federal budget trends we are working with, and while we are planning for small levels of real growth—we are mindful of the need for maintaining a hedging posture and are executing a defense modernization and sustainment strategy that is tuned to the larger economic and federal budget trends at work today.

### **STRATEGIC SYSTEMS FORECAST**

Reduced defense budgets and new post-Cold War dangers make the task of protecting America's national security different and in some ways more complex than it was during the Cold War. Previously, our force structure was based on the need to deter a global war with the Soviet Union, which we considered a threat to our very survival as a nation. All other threats, including regional threats, were considered lesser-but-included cases.

The forces we maintained to counter the Soviet threat—nuclear and conventional—were assumed to be capable of dealing with any of these lesser challenges. Today, the threat of global conflict is greatly diminished, but the danger of regional conflict is neither lesser nor included and has therefore required us to take this danger explicitly into account in structuring our forces.

We have no requirements today for new nuclear capable bombers. But we do have a need for improving the conventional precision strike capabilities of our bomber force. We are in the process of adding a GPS-aided targeting system and GPS-aided munitions—GATS/GAM capability—to our fleet of nuclear capable B-2 bombers.

Through our Conventional Munitions Upgrade Program, we are modifying the B-1 fleet to accept the Wind Corrected Munitions Dispenser—a cluster bomb unit container with INS guidance and tail-fin actuators. We are also proceeding with electronic countermeasures improvements to the B-1 fleet and embarking upon sustaining engineering programs to allow the B-52H bomber to continue as a component of our strategic forces through 2040.

We have no requirements today for new nuclear missile submarines. The USS LOUISIANA, to be delivered next summer, will be the eighteenth and last Trident submarine to be built. But we do have a need for a new attack submarine—the next generation fleet ballistic submarine may well be a derivative of the new attack submarine being developed today. We are also evaluating the possibility of extending the service life of OHIO-class Tridents from 30 years to 40 years. We are completing D-5 missile production to meet current requirements, including the backfit of four Trident I or C4 ships.

And we have no requirements today for a new land-based intercontinental ballistic missile. But do have a need to modernize and sustain our current Minuteman III strategic missile system and have embarked on significant propulsion and guidance replacement programs.

Both the United States and Russia are continuing to reduce the number of nuclear weapons in their respective arsenals, consistent with the START I treaty agreement. And they will be reduced further with the ratification of the START II treaty. Although delayed because of linkage with ABM Treaty issues, START II will further reduce the nuclear arsenals of Russia and the U.S. from the START I limits of 6,000 accountable weapons to 3,000 and 3,500 warheads apiece.

The bottom line, though, is our future strategic requirements have been unchanged since the 1994 Nuclear Posture Review. A protracted delay of START II ratification would cause us to re-evaluate our force structure and adopt a hedging posture. The 1997 Quadrennial Defense Review will be the next opportunity to take another look at our force structure—including our strategic deterrent forces—and lay out the investment strategy required to sustain that force structure.

## **SUSTAINMENT STRATEGY**

Our immediate challenge is to structure a sustainment program for our current and projected strategic deterrent force structure within realistic budget constraints. The question we must resolve is how to sustain the unique industrial capabilities (including human talent—people) needed to develop, produce, and support strategic systems now and in the future.

During the Cold War, the survival of our nation was at stake and we were prepared to spend whatever it took to stay ahead of our adversary—the Soviet Union. If necessary, we were prepared to, and in certain cases, did fund the start of whole new industries. Those days are gone.

In the post-Cold War era, we have the opportunity to take a less “brute force” and a more sensible approach to sustaining our strategic systems. We can leverage off of commercial and other defense investment in common aerospace industrial capabilities and minimize the need for expensive, unique solutions for strategic systems. We will still spend what it takes to sustain the unique elements of our strategic forces—but only after every attempt has been made to leverage common capabilities.

Consistent with these principles, I want to stress that our approach to sustaining unique industrial capabilities does not include “managing” industrial sectors or

companies. We carefully monitor industrial sectors and identify essential industrial capabilities – engineering and manufacturing – that may be in jeopardy.

To add discipline to this process, the Department has issued a formal policy on identifying and addressing potentially endangered capabilities. We also have developed a handbook, "Assessing Defense Industrial Capabilities," providing guidance on how to determine: (1) if certain industrial capabilities are essential to making the products and providing the services the DoD needs; (2) if the capabilities are truly unique; (3) if the capabilities are truly endangered; and (4) the best course of action for DoD to take.

We recognize there are a small percentage of strategic system requirements that today require defense unique industrial capabilities. In those identified cases, the Department is taking the steps necessary to sustain those unique capabilities.

For example, we established the Guidance Applications and the Reentry Systems Applications programs to specifically sustain the unique engineering skills needed for strategic systems' highly accurate guidance requirements and severe reentry vehicle operational requirements.

We have also set up an integrated product team – an IPT – to look at ensuring the availability of radiation hardened integrated circuits that can survive nuclear effects. You will be hearing more about this activity later today.

I want to challenge you to "step out of the box" in considering how we might transition currently unique strategic systems industrial capabilities to those available in a common industrial sector. We need to capitalize where we can on the advances and benefits in these commercial industrial sectors to meet defense requirements.

We received several suggestions from our questionnaire that indicate you have already begun the process of thinking outside the "box." One comment pointed out that unique instruments are used to process guidance units for strategic applications due to very high and robust performance requirements. At the same time, there is now a large commercial guidance industry delivering highly reliable, low cost inertial guidance components produced in relatively high volume for commercial applications. Commercial instruments and processes might be adapted for use in strategic systems with the insertion of innovative systems architectures and slightly relaxed requirements.

The burden of thinking outside the "box" does not solely rest on the shoulders of the strategic systems industrial community. The Department must also generate ideas where we can move away from unique solutions. In this respect, we must look at refining are requirements to take advantage common technologies and industrial

capabilities in other defense areas, like Ballistic Missile Defense, space launch vehicles, and space payloads.

One example relates to the unique requirement of submarine launched ballistic missiles that drives the use of a class 1.1 solid rocket motor propellant. Other defense applications and the commercial and civil space sector make use of class 1.3 propellant formulations. This might be one such area where we might take a closer look at not sustaining a class 1.1 defense unique industrial capability and identifying a design solution utilizing a class 1.3 propellant. Over the past year, the Strategic Systems Technology Sustainment Integrated Product Team has looked into the class 1.1 solid rocket propellant problem. Funding subsequently was approved for a science and technology effort to develop a suitable class 1.3 propellant solution.

In addition, this integrated product team identified several technology areas which required DoD action to sustain a unique engineering capability or move us to more common industrial capabilities and materials--solid rocket motor propulsion, MIRV deployment and control, aging and surveillance, submarine navigation, flight science and analysis, and underwater launch. You will hear more about the team's findings, and resulting DoD actions, later this morning from George Singley.

We have set in place an arrangement with NASA to cooperatively assess problems and develop solutions that are consistent with our objective to leverage a more "common" industrial base.

Last month, a joint DoD/NASA working group was established to evaluate options related to the production of carbonizable rayon. This activity was prompted by an announcement by North American Rayon Corp (NARC), the domestic sole supplier of carbonizable rayon, that it intended to close its facility at the end of 1996. In fact, recent rayon orders from various DOD programs will keep NARC operating through the first half of fiscal 1997. The working group is analyzing a number of technical and financial issues in support of a recommended best course of action, which I expect to be finalized within the next 2-3 weeks.

We are working another potential problem, though not of near term concern, with Ammonium Perchlorate (AP) production to support NASA and DOD systems. Currently there are two domestic suppliers of Ammonium Perchlorate. WECCO supplies approximately 95% of NASA requirements, while Kerr-McGee supplies virtually 100% of DOD needs. The joint DoD/NASA working group plans examine acquisition and cost considerations for maintaining two suppliers.

## ROLE OF ACQUISITION REFORM

We must move from industrial sectors for defense and commercial products — artificially separated by DoD rules and procedures — to a common, integrated national industrial base. One of the principal objectives of our acquisition reform program is to open the defense market to commercial companies and technology — not only the primes, but sub-tier suppliers as well.

We have effectively turned our procurement system on its head with respect to military specifications and standards. A program manager in the past had to get a waiver in order to use commercial and performance standards. Now the reverse is true. If a program manager wants to use military specifications, then he has to get a waiver in order to justify the extra cost entailed in military specifications.

We have reviewed all of our 30,000 specifications and standards, eliminating 2600 of them to date. We are continuing to implement the decisions on these documents. It is important to note that our policy is not one of "zero tolerance." Military specifications will continue to be used in some cases, such as to define interfaces and ensure safety. In these cases, however, we still want to make sure that the documents are current and include current technology. Conversion to commercial specs is not always as simple as it appears — especially in the strategic systems community. I look forward to further engagement as we proceed down this path.

The Department's Single Process Initiative is significant in that it is aimed at changing existing contracts to address a very real problem in many of our contractor's facilities — the requirements that impose different processes to manufacture similar product lines.

The single process initiative deals with this problem by reducing the number of different processes and relying on proven commercial processes as much as possible. Our objectives are: one, to save money; two, to obtain a better product; and three, to foster a more competitive industry.

In the first nine months since we launched this effort on December 8, 1995, we have received 295 concept papers from 91 contractors proposing to modify 364 processes. Thirty-three contractors have modified 90 processes.

Our ACOs have signed block change modifications with Texas Instruments, Raytheon, Northrop Grumman; Allied Signal Engines; ITT Avionics; and Lockheed Martin Federal Systems — to name a few. Last April, we signed a single block change modification impacting 884 contracts at 16 separate Raytheon facilities. This effort is now taking root within a wide spectrum of our supplier base.



This is good news. But, based on the survey responses we received for this conference, I get the sense that not all the acquisition reforms are moving as quickly as we would like. Last year, you raised a concern about the slow pace of implementation for the National Security Industrial Program. I would specifically like to hear more about how well you think we are doing this year on our security reforms. I intend to follow-up in those cases where the Department is the weak link in the implementation of acquisition or security reforms.

One other issue that you raised last year was people. How do we attract and retain the best and brightest in this industry? It would appear that part of the solution is to devote more attention to providing system-level demonstration and test opportunities. In particular, we need to provide young engineering teams with opportunities to demonstrate system designs using commercial components. More importantly, we need to provide a path and incentives for the best and brightest to continue to enter our world.

## SUMMARY

In summary, my thoughts regarding sustainment of an effective strategic nuclear deterrent can be best summed up as follows:

- We are planning for small levels of real growth—less than one percent—in the defense budget, but mindful of the need to maintain a hedging fiscal posture for sustaining our existing systems;
- We need to leverage off of commercial and other defense investment in common industrial capabilities to sustain our strategic forces;
- We must focus on implementing lasting acquisition and security reforms to open the defense market to commercial technology and processes.

As we move through today's agenda, I believe these points will continue to surface as recurring themes.

I recognize that unique strategic systems requirements, and the defense unique industrial capabilities needed to meet these requirements, cannot be eliminated entirely. We need to work together, to minimize the disproportionate costs of defense unique solutions. In this way, we can ensure that we sustain the robust, innovative defense industrial structure needed to maintain effective strategic nuclear deterrent forces.

A symposium like this is very helpful. One, it allows us in government to tell you where we are trying to head. And two, it allows you to point out problems—those unknown obstacles in the path ahead which we can together avoid.

Daniel Webster once said "God grants liberty only to those who love it and are always ready to guard and defend it."

For nearly a half-century of Cold War the men and women of our strategic forces were on call and ready to defend our liberty. They are ready now. They will be ready tomorrow. Finding new and innovative ways to support and sustain our strategic forces is an obligation we owe not only to our men and women in uniform—but to America.

Thank you all. I look forward to working with you as we chart a course ahead.